

WHAT IS CLAIMED IS:

1. An apparatus for processing displayed data in a system having a computer for processing data and a display device with an amplifier for amplifying input signals from the computer, the apparatus comprising:

a Micom for controlling the display device, and outputting a selection signal and a vertical synchronizing signal in dependence of the operation of the computer;

a comparator for comparing the selection signal with the vertical synchronizing signal, each being outputted from the Micom, and outputting a storage related signal; and

a memory for saving an image signal corresponding to the storage related signal generated as an output signal from the comparator.

2. An apparatus for processing displayed data in a system having a computer for processing data and a display with an amplifier for amplifying input signals from the computer, the apparatus comprising:

a Micom for controlling the display, outputting a selection signal and generating a synchronizing signal in dependence of the operation of the computer, and outputting a storage related signal in dependence of the comparison result; and

memory for saving an image signal corresponding to the storage related signal generated as an output signal from the comparator.

3. An apparatus according to claim 1, wherein the selection signal is generated in response to a storage command signal externally generated by a user.

4. An apparatus according to claim 1, wherein the selection signal is automatically generated by the Micom when malfunction of the computer is detected.

5. The apparatus according to claim 1, further comprising:

an A/D converter, under the control of the Micom, for converting an analog image signal outputted from a preamplifier of the display device to a digital image signal, and for transmitting the digital image signal to the memory.

6. The apparatus according to claim 1, wherein the image signal saved in the memory is a digital image signal outputted from the A/D converter, equipped in the display device, by controlling of the Micom.

7. The apparatus according to claim 1, wherein the Micom is arranged to display the image signal saved in the memory to the display device if a restoration command signal is input to the Micom,.

8. The apparatus according to claim 1, wherein the comparator is arranged to compare the selection signal with the vertical synchronizing signal, each being outputted from the Micom, and if logic levels of both signals are same, output a storage command signal.

9. The apparatus according to claim 1, wherein the Micom is arranged to output a vertical synchronizing signal when an horizontal/vertical synchronisation signal is not input to the display device when the PC is under normal operation, or when a terminal output signal indicates that a connection between the PC and the monitor is under open state.

10. The apparatus according to claim 8, wherein the comparator is arranged to compare the selection signal with a vertical fly back pulse signal.

11 The apparatus according to claim 8, wherein the comparator is arranged to output the storage related signal when the selection and vertical synchronizing signals outputted from the Micom are both high or low.

12. The apparatus according to claim 8, wherein the Micom is arranged to save the image signal in the memory in response to a first command signal outputted from the comparator, and end storage of the image signal in response to a second command signal outputted from the comparator.

13. The apparatus according to claim 12, wherein the Micom is arranged to save the image signal in the memory by outputting a storage start signal with respect to the image signal when the first command signal is input from the comparator, , and the Micom is arranged to end storage of the image signal by outputting a storage end signal when the second command signal is input from the comparator,.

14. The apparatus according to claim 13, wherein a storage section corresponds to a period of the vertical synchronizing signal, and is a section of an image signal corresponding to one frame displayed on a full monitor screen.

15. An apparatus for processing displayed data in a system having a computer for processing data and a display device with an amplifier for amplifying input signals from the computer, the apparatus comprising:

a Micom for controlling the display, and outputting a selection signal and a vertical synchronizing signal in dependence of the operation of the computer;

a comparator for comparing the selection signal with the synchronizing signal, each being outputted from the Micom, and outputting a storage related signal;

a memory for saving an image signal corresponding to the storage related signal generated as an output signal from the comparator;

an A/D converter, under the control of the Micom, for converting input analog image signals from the amplifier of the display device to digital image signals; and

a scaler for converting an input signals from the A/D converter to a displayable format.

16. The apparatus according to claim 15, further comprising:

a clock generator, connected to the A/D converter and scaler, for signal synchronization or tuning.

17. The apparatus according to claim 15, wherein the Micom and the comparator can be made as separate components, or the Micom performs the function of the a comparator.

18. A method for processing displayed data in a system having a computer for processing data and a display device with an amplifier for amplifying input signals from the computer and a controller, the method comprising the steps of:

processing and displaying data;

determining whether the computer is off or frozen;

if the computer is off or frozen, applying a storage command signal to the display device in order to save displayed data; and

saving in a memory a storage section of an image signal set for a signal generated by the storage command signal and to a synchronizing signal.

19. The method according to claim 18, further comprising the step of:
when the data saved in the memory is restored, converting and displaying the data saved in the memory.

20. A method for processing displayed data in a system having a computer for processing data and a display device with an amplifier for amplifying input signals from the computer and a controller, the method comprising the steps of:
receiving a storage command signal; and

in response to a selection signal generated by the storage command signal and a vertical synchronizing signal, said storage command signal being dependent on an operational state of the computer, storing an image signal displayed on the display device in a memory.

21. The method according to claim 20, wherein the step of storing the displayed image signal in the memory comprises substeps of:
outputting the selection signal;

comparing the selection signal with the vertical synchronizing signal, and outputting a storage signal when the two signals are both high or low; and

in response to the outputted storage related signal, starting storage of the displayed image signal and/or ending storage of the displayed image signal.

22. A method for processing displayed data in a system having a computer for processing data and a display device with an amplifier for amplifying input signals from the computer and a controller, the method comprising the steps of:

receiving a storage command signal;

in response to a selection signal generated by the storage command signal and a vertical synchronizing signal in dependence of an operational state of the computer, storing an image signal displayed on the display device in a memory;

receiving a restoration command signal of data stored in the memory; and

reading an image signal stored in the memory, and displaying the image signal on the display device.

23. The method according to claim 22, wherein the step of reading the image signal stored in the memory and displaying the image signal on the display device comprises substeps of:

in response to the restoration command signal, transmitting the image signal stored in the memory to the computer, amplifier or scaler; and

displaying the transmitted image signal on a screen of the display device.

24. The method according to claim 23, wherein the step of transmitting the image signal stored in the memory to the computer comprises substeps of:

converting the received image signal;

receiving an image signal retransmitted from the computer; and

displaying the retransmitted image signal from the computer on the screen of the display device.

25. The method according to claim 24, further comprising the steps of:

in the computer, receiving the transmitted image signal and converting the image signal to an adequate image signal for transmitting to the display device; and transmitting the converted image signal to the display device.